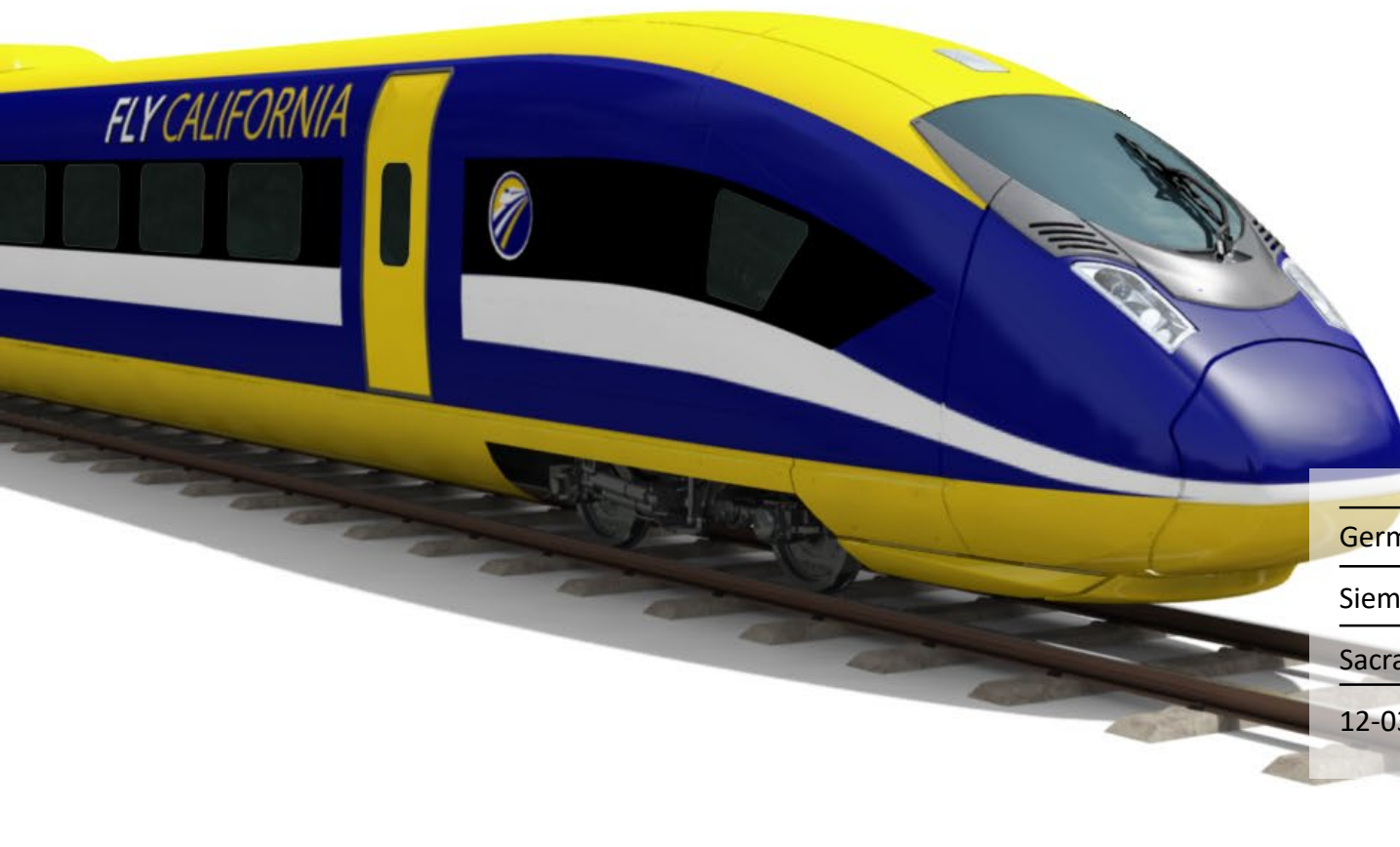


High-Speed Rail for California

Presentation CHSRA Board Meeting



German Federal Ministry of Transport

Siemens AG, DB Mobility Logistics AG

Sacramento, CA

12-03-2009

Germany's Competence in High Speed Rail

High Speed Rail – The German Experience

Lessons Learned and International Experience

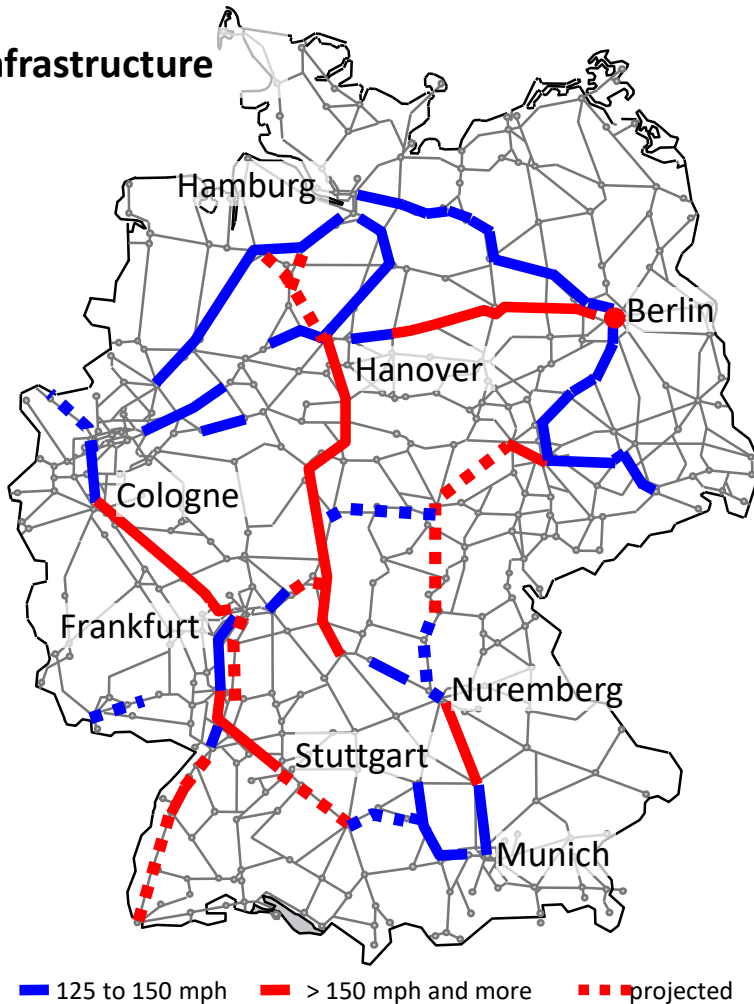
Importance of being local - We are a USA Team

Our Recommendations and our Commitment



Germany's HSR infrastructure has grown continuously – Completion by 2025

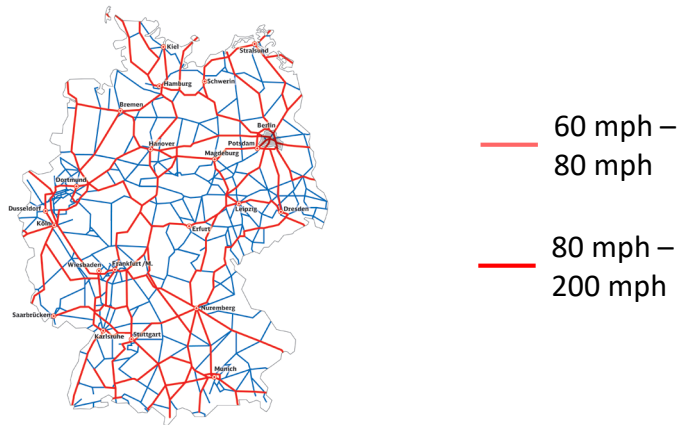
HSR-Infrastructure



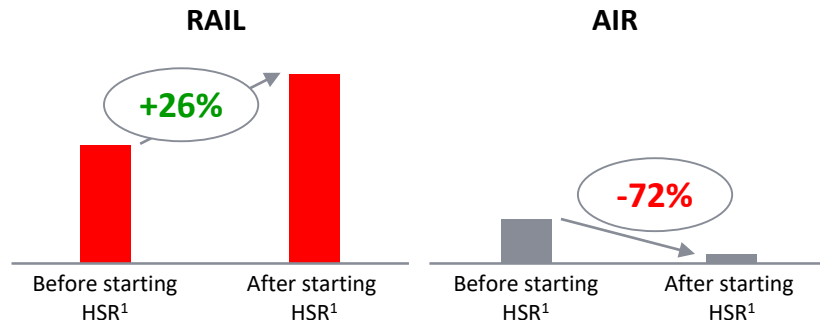
- **1991:** Launching first **High Speed** service **Hamburg – Munich** on new and upgraded lines
- **Continuous development** of HSR network – 2003 major **milestone:** travel time reduction on **Frankfurt - Cologne** by **50%**
- Currently HSR provides **50% of long distance services** – **60% in 2020**
- By **2025 Completion** of the German HSR infrastructure (approx. 3000 miles)

The German rail network is one of the largest in Europe and one of the most modern worldwide

Rail network in Germany



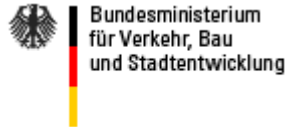
Modal shift Frankfurt - Cologne



1) Start HSR Cologne – Frankfurt am Main in 2003, passenger figures

- Germany's HSR connects many regional centers through a **dense network with regional feeder systems**
- The passenger rail market in Germany is fully **deregulated** since 1994 – free market access for more than 50 operators
- Average Market share of **Rail based long distance traffic is over 11%**
- In some **HSR lines market share exceeds 50% (i.e. Frankfurt – Cologne)**

HSR in Germany is based on an excellent collaboration between the Government and Industry



- Since '94 fully deregulated passenger & freight transport market
- **144,000** miles road network
- **21,000** miles main line rail
- **163** million flight passengers
- **73%** of population in cities
- **600** cars per 1000 inhabitants

SIEMENS



- Active in **3 sectors**: Industry, Energy, Healthcare
- \$110"0 revenue (**USA: \$ 22"0**)
- 420,000 employees in 190 countries (**USA: 70,000**)
- **165 years** in business, **25 years** production in **California**
- **No.1 Sustainability Portfolio**
- **High Speed Rail** in Germany, Russia, Spain and China

DB Mobility Networks Logistics



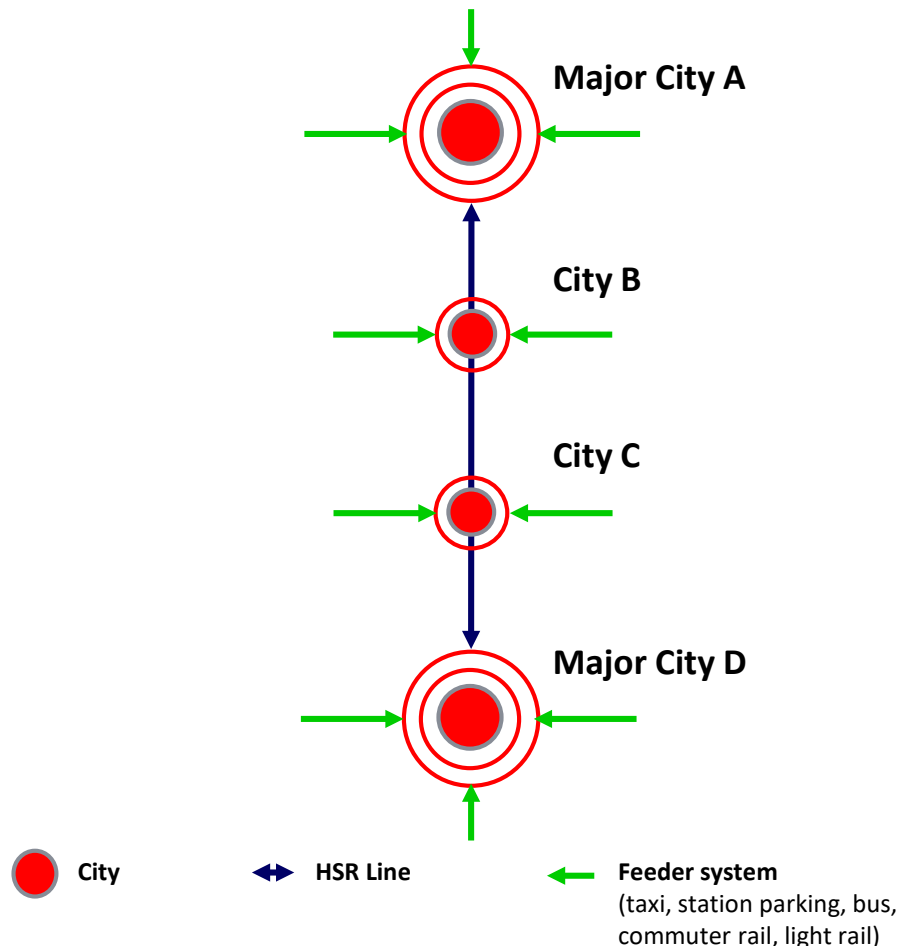
- **Integrated provider** of infrastructure and operation
- **\$ 47"0** revenue (**USA: \$ 3"0**)
- **240,000** employees (**USA: 6,000**)
- **27,000** passenger trains per day and **5,400** freight trains per day
- **Logistic forwarder** in USA since 1947

All data as of year 2008



HSR is the backbone of a passenger rail system – regions get access to HSR by attractive feeder systems

HSR feeder system

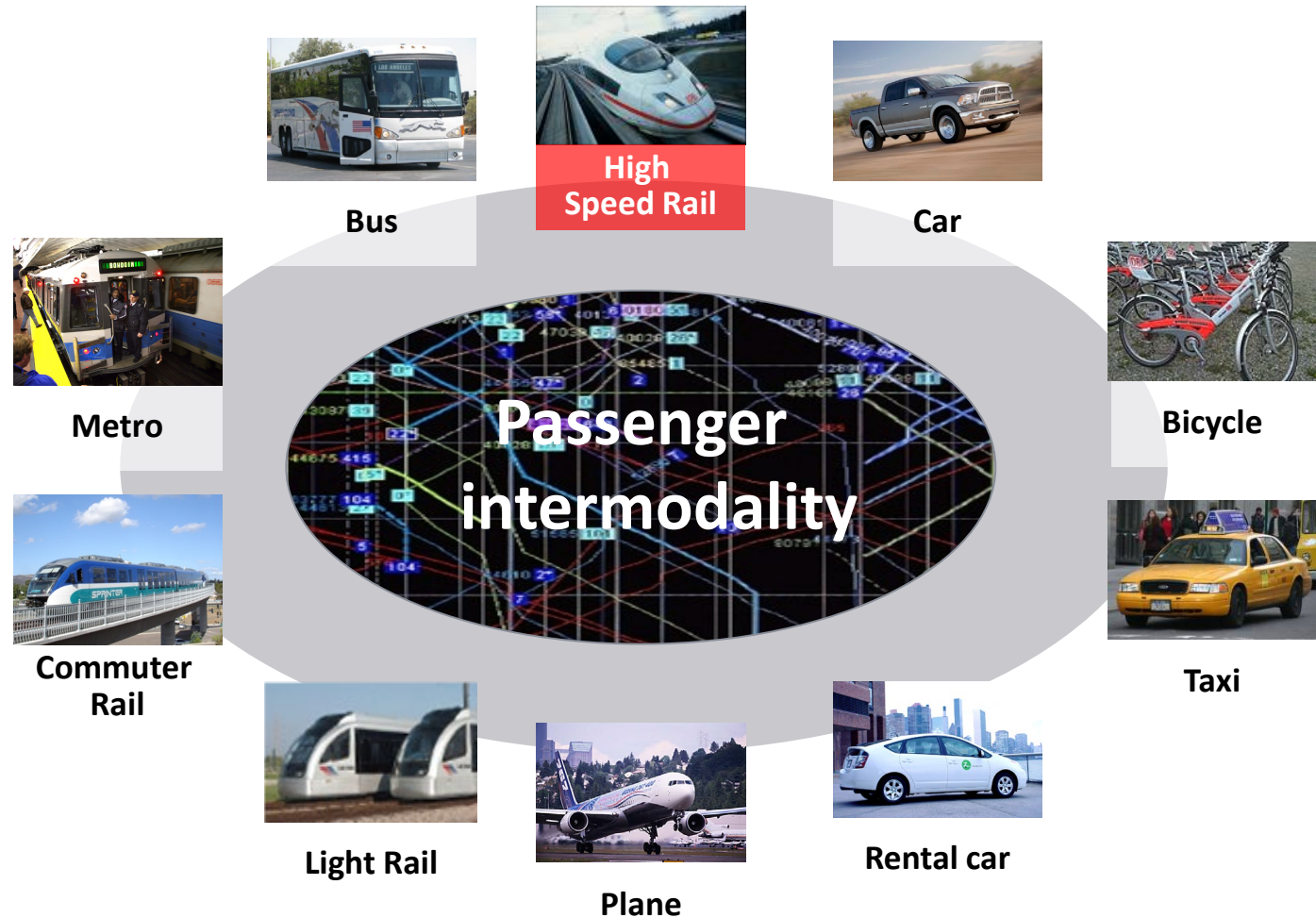


- **HSR is the backbone** of public transportation systems
- **Different modes of transport facilitate region wide access** to HSR and secure the capacity utilization
- **Connectivity between all different modes of transport** has to be ensured (station parking, taxi, bus, light rail, commuter rail etc.)
- **HSR connects and increases the value** of entire regions and strengthens the competitiveness



Passenger Intermodality is the key for a HSR network

- Interchange stations to link with feeder systems
- Direct connection of airline hubs by rail
- Park & rail facilities for commuters
- Car rental / car sharing at station
- New ticket systems, e.g. integrated city transit & HSR tickets



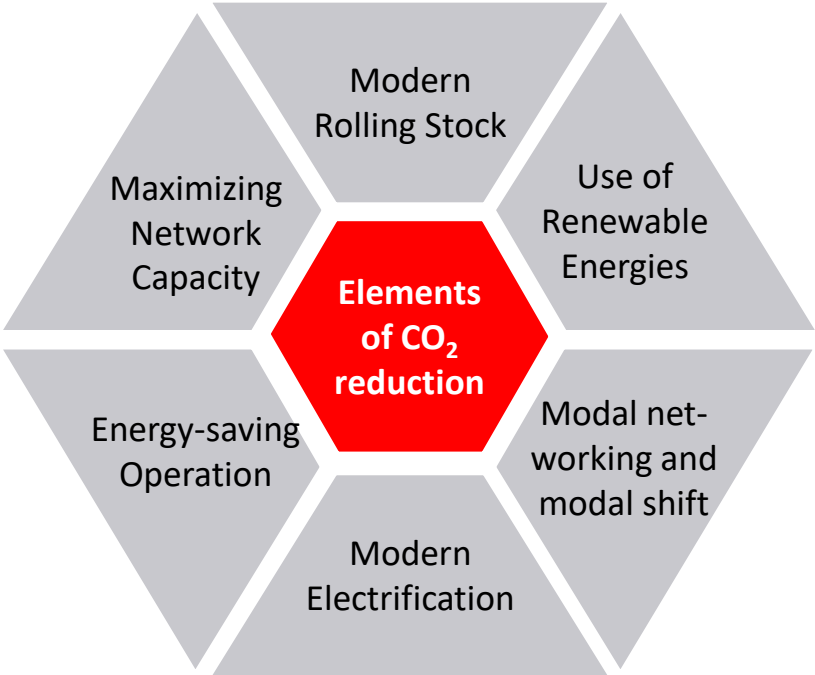
HSR supports successful regional development... and results in strong economic growth



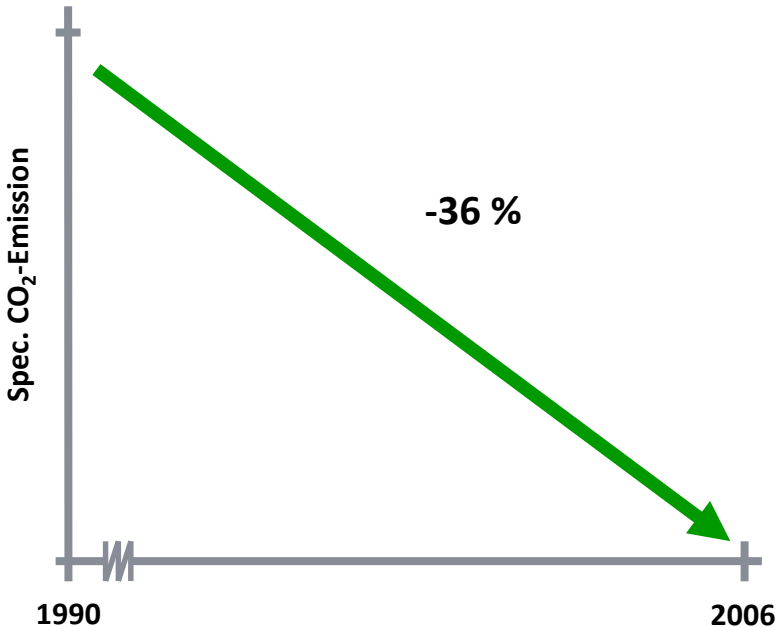
- **Land value increases** significantly in cities with HSR access
- **Commercial and industrial estate developments** around HSR stations result in jobs and fiscal revenues
- HSR gives impulses for **touristic development** and provides **high-capacity transport** for events

HSR is climate-friendly and reduces energy demand and CO₂ emissions

Our protection program 2020 for reducing energy consumption CO₂ emissions



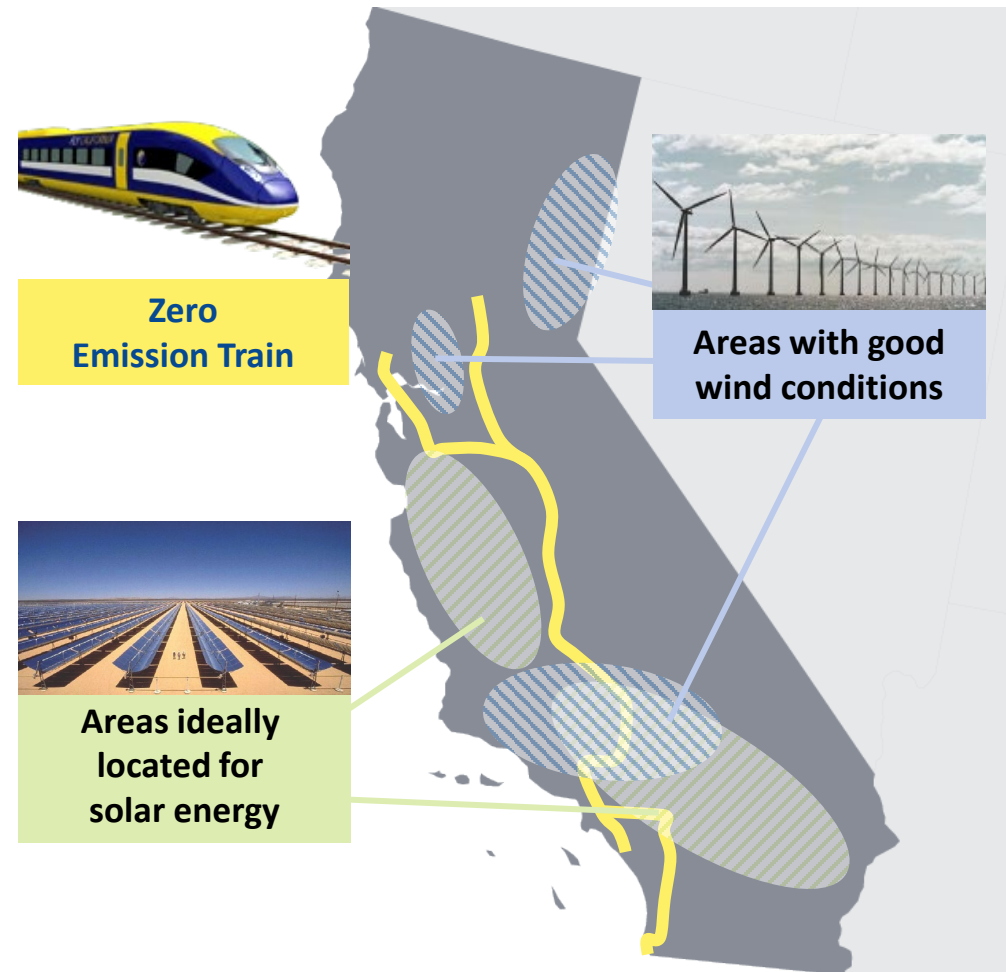
Specific CO₂ reduction of DB AG (1990 - 2006)



New climate protection goal for 2020 (all DB Group activities) is -20 percent compared to 2006

Solar and wind power can run the CA High Speed Rail System and reduces energy consumption

- German Partners have an extensive **experience in reducing CO₂ and energy consumption**
- California's goal¹⁾ to reduce **CO₂ emissions** are as ambitious as in Germany
- Energy supply for the CA HSR System from a combination of **solar and wind power**
- Solar and wind power **reduces the dependency on foreign energy sources**



¹⁾ California's goal of 20% of power generation through Zero Emission technology by 2020 Germany: CO₂ reduction target of 25% by 2020

Our expertise in technology transfer and international experience

- German industry has helped many countries to **design, build and implement** rail systems
- **DB is the No.1 European Rail Network Operator** with extensive international experience working with local operators
- Siemens won **5 of the latest 8 international** orders and has vast experience transferring **proven technology**, adapting to local requirements
- **... but all business is local:**
Localized production, maintenance and service delivery to create jobs and to be where the customers are.



International High Speed Trains



China

Russia

Spain

International Operations Know-How



Local Commitment in California



Sacramento Factory

We are a USA Team with a strong base in Sacramento and a commitment to California

- **Siemens USA** has 70,000 employees, **5,400 in California** (1,000 in Sacramento)
- **Siemens is a local manufacturer** of rail vehicles with a **25-year history in CA**
- **DB** brings in a vast international operator's experience to **set-up a California high speed rail network**
- **DB (Schenker)** employs over **6,000 people** in the USA (HQ in Irvine)
- We are **part of the California society**



Education



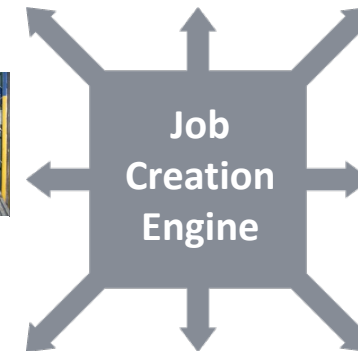
Construction



Operation



Industry



Tourism



Railway stations



Regional development

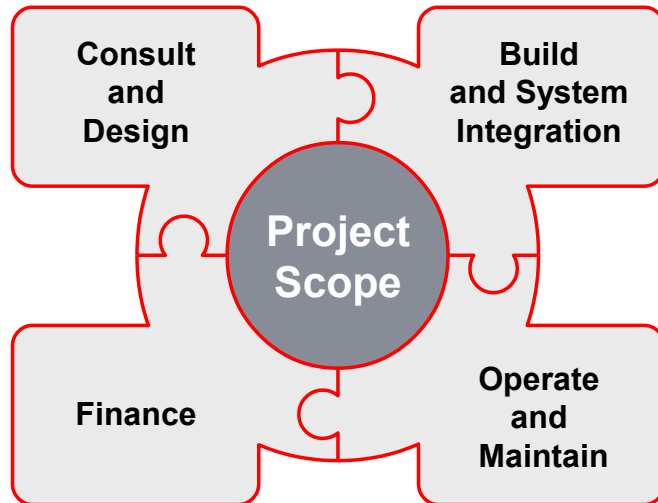


Service

Together we are forming a team with local operators and U.S. civil partners

We are a reliable and flexible Partner for California

Project Scope



+



Expertise

- High Speed Rail Operator
 - Regional and Metro Operator
 - Network Operator
 - Engineering and Consulting
-
- Rolling Stock
 - Signaling and Electrification
 - Local Manufacturing in California
 - Turnkey Expertise incl. PPP

"Best fit" and flexible Partnering for California Project possible

Our recommendations for High Speed Rail California

Our experience can be transferred to HSR California

- Decide on a "best-fit" project model and structure
- Start with a system that guarantees sufficient ridership to ensure early success
- Continue with a step by step expansion plan to reach an integrated intermodal system
- Engage industry partners early to ensure experience and technology transfer





We are committed to supporting California on its way towards a leading position in High Speed Rail

We give our Commitment ...



- ... to form a strong USA High Speed Rail Team
- ... to transfer innovative High Speed Rail Technology
- ... to bring in our Operations and Service Know-How
- ... to create sustainable and environmentally friendly solutions
- ... to generate CA Jobs and to live Social Responsibility